

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2005/000353

## A. CLASSIFICATION OF SUBJECT MATTER

**IPC7 H02N 2/04**

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 H02N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
 Korean Patents and applications for inventions since 1975  
 Korean Utility models and applications for Utility models since 1975  
 Japanese Utility models and application for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 03-178581 A (SUMITOMO METAL IND. LTD.) 2 AUG 1991 page 3 line 8 - page 4 line 37, figs 1, 6, 7	1-3
A	JP 11-285278 A (KYOCERA CO.) 15 OCT. 1999 claims 1 and 2, figs 1-8	1,2
A	JP 2003-284364 A (KOREA ADVANCED INSTITUTE OF SCIENCE TECHNOLOGY) 3 OCT. 2003 abstract, claims 1-6, figs 1 and 3	1
A	JP 63-283478 A (MARCO ELECTRONICS CO. LTD.) 21 NOV. 1998 see the whole document	1
A	JP 02-188169 A (SONY CO.) 24 JUL. 1990 see the whole document	1

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

28 JUNE 2005 (28.06.2005)

Date of mailing of the international search report

**28 JUNE 2005 (28.06.2005)**

Name and mailing address of the ISA/KR



Korean Intellectual Property Office  
920 Dunsan-dong, Seo-gu, Daejeon 302-701,  
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

JEON, Yong Hai

Telephone No. 82-42-481-5657

